REMARKS/ARGUMENTS

The action by the Examiner of this application, together with the cited references, has been given careful consideration. Following such consideration, claims 1, 6, and 8 have been amended and a new claim 11 has been added, to define more clearly the patentable invention applicant believes is disclosed herein. Moreover, claim 5 has been cancelled. Claims 2-4, 7, and 9-10 are unchanged by the present amendment paper. It is respectfully requested that the Examiner reconsider the claims in their present form, together with the following comments, and allow the application.

The applicant's representative wishes to thank the Examiner and the Examiner's supervisor for the courtesies extended during the telephone interview held on October 12, 2005.

The Examiner has rejected claims 1-7 as being obvious in view of the combined teachings of U.S. Patent No. 6,724,133 to Miyashita et al. and U.S. Patent No. 3,753,795 to Weber. Furthermore, claim 8 has been rejected as being obvious in view of Miyashita et al., Weber, and U.S. Patent No. 6,470,845 to Kanao. Claims 9 and 10 which were newly added in the prior Office Action have not been addressed by the Examiner in the Office Action. *The Examiner is respectfully requested to indicate the status of these claims.*

It is respectfully submitted that none of the cited references, taken individually or in combination teach or suggest the applicant's invention as now set forth in the present claims.

In view of the comments provided by the Examiner and the Examiner's supervisor during the telephone interview, claim 1 has now been further amended to more specifically define the composition of the nickel alloy. In particular, claim 5 has been cancelled, and limitations from this claim have now been incorporated into independent claim 1. In this regard, claims 1 now defines the Ni alloy as further containing "at least any one of Mn, Cu and Co, as a secondary component." Support for this limitation is found at paragraph [0018] of the specification.

Referring to paragraph [0019] of the specification, a composite oxide which contains an oxide of Al and an oxide of Mn, Cu or Co will form a semiconductor. In accordance with the present invention at least any one of Mn, Cu or Co is added, along with Al, as a secondary component of the Ni alloy. As a result, the coating layer (formed on the surface of a

distal end portion of the insulator) will contain a *composite* oxide semiconductor having an oxide of Al as a component (e.g., a composite oxide semiconductor consisting of aluminum oxide and manganese oxide). This composite oxide semiconductor takes the place of a highly electrically insulative oxide of Al (Al_2O_3). The electrical conductivity of the coating layer will be increased by the composite oxide semiconductor, thus causing a reduction in the discharge voltage. Consequently, channeling of the insulator will be more effectively suppressed.

It is respectfully submitted that the abovementioned advantageous effects of the claimed secondary components of the Ni alloy would not have been obvious to one of ordinary skill in the art.

Furthermore, it is respectfully submitted that neither Miyashita et al. nor Weber teach or suggest a spark plug, as defined by amended claim 1, that comprises a *Ni alloy* that includes all of the following elements:

(1) Ni as a primary component in an amount of 80 wt% or more;

(2) Fe and Cr as secondary components in a total amount of 2.5 wt% to 10.0 wt.%;

(3) Fe as a secondary component in an amount of about 1.0 wt% to about 6.0 wt%;

(4) Al as a secondary component in an amount of 0.2 wt% to 0.8 wt%; and

(5) At least any one of: Mn, Cu and Co as a secondary component.

As discussed above, and as described at length in the previous Response, the combination of elements as defined in claim 1 provide advantageous effects absent in the prior art with respect to suppressing *channeling* of the insulator and preventing *erosion* of the center electrode. Therefore, the claimed invention would not have been obvious in view of the cited references.

In view of the foregoing, it is respectfully submitted that claim 1 is patentable over the cited references. Furthermore, it is respectfully submitted that the remaining claims, all of which depend from claim 1, are likewise patentable over the cited references.

With regard to newly added dependent claim 11, this claim further limits the newly added limitations of claim 1. In particular, claim 11 recites that "the Ni alloy contains at

least any one of *Mn and Co* as a secondary component." It is respectfully submitted that none of the cited references teach or suggest a "spark plug" as further defined by claim 11.

The cited references made of record and not relied upon have also been reviewed. It is respectfully submitted that none of these additional references teaches or suggests the applicant's invention as defined by the present claims.

In view of the foregoing, it is respectfully submitted that the present application is now in proper condition for allowance. If the Examiner believes there are any further matters that need to be discussed in order to expedite the prosecution of the present application, the Examiner is invited to contact the undersigned.

If there are any fees necessitated by the foregoing communication, please charge such fees to our Deposit Account No. 50-0537, referencing our Docket No. NG8775US.

Respectfully submitted,

Date: **November 18, 2005**

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I hereby certify that this correspondence (along with any paper referenced as being attached or enclosed) is being deposited on the below date with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: **November 18, 2005**

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